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## IN THE CLAIMS:

Cancel claims 1-20 without prejudice and add the following new claims in lieu thereof.

- effector T-cells, which method comprises providing a fluid containing T-cells, presenting to the T cells one or more T cell activating peptides, incubating the fluid to cause cytokine release, and detecting the released cytokine, wherein incubation is continued for a time to permit cytokine release by only those T-cells that have been presensitized in vivo to the peptide and are capable of immediate effector function without the need to effect division/differentiation by in vitro culture in the presence of the peptide.
- 22. The method as claimed in claim 21, wherein the fluid is in contact with a surface carrying an immobilized first antibody to the cytokine, and the cytokine is detected in the form of being bound to the immobilized first antibody.

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23. The method as claimed in claim 21 wherein one or more peptides derived from ESAT-6 of *M. tuberculosis* are presented to the T cells.

- 24. The method as claimed in claim 21, wherein the T-cells are peripheral blood monoclonuclear cells.
- 25. The method as claimed in claim 21, wherein the peptide-specific effector T-cells are CD8+ or CD4+ cells and the cytokine is IFN- $\gamma$ .
- 26. The method as claimed in claim 21, wherein a peptide of 7-15 amino acid residues in length is added to the T-cell containing fluid.
- 27. The method as claimed in claim 21, wherein the resulting fluid mixture is incubated under non-sterile conditions.
- 28. The method as claimed in claim 21, wherein the peptide is a known epitope.

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29. The method as claimed in claim 21, wherein the fluid contains fresh T-cells that have not been cultured in vitro.

- 30. The method as claimed in claim 21, wherein incubation is continued for a time of 4 to 24 hours.
- 31. The method as claimed in claim 21, wherein the T-cells are taken from a patient known to be suffering, or to have suffered, from infection with a pathogen.
- 32. The method as claimed in claim 21, wherein said method is performed to monitor progress of HIV infection.
- 33. The method as claimed in claim 21, wherein said method is performed to monitor the effect of a vaccine.
- 34. The method as claimed in claim 21, wherein said method is performed to determine a pathogen-derived epitope targeted by CD4+ or CD8+ T cells.
- 35. The method as claimed in claim 21, wherein said method is applied to the study or diagnosis or monitoring